

Playing with isosceles triangle

Naruto was always alone as a kid. He used to get bored a lot and always tried different things for fun. Once he got fascinated by isosceles triangles and developed a game. He will choose a integer value S to be length of the equal sides of the isosceles triangle. Now if it is possible that he can form any triangle which has a third side of even length as well a height of integral value with the third side as base then he becomes happy.

Given S determine if Naruto will be happy.

Input

First line contains T , the number of test cases. ($T \leq 10000$)

The next T lines each contain a integer value $S < 1000000$.

Output

For each of T test cases output YES if Naruto will be happy and NO otherwise

Example

Input:

2

5

8

Output:

YES

NO

Explanation:

In 1st case for $S=5$, the third side can be 6 and height can be 4.

In 2nd case for $S=8$, no such combination is possible.